

Page 11, paragraph starting at line 5, has been amended as indicated below:

A² FIG.4 represents the quality of surface morphology obtained for the cap layer 13 when the total thickness L_w of the optical absorption layer 12A and the strain ϵ_w therein are changed variously under the constraint that the total thickness L of the superlattice structure 12, and hence the sum of the total thicknesses of the optical absorption layers 12A and the strain-compensating layers 12B, is set to $1.3 \mu\text{m}$. From the relationship of Eq.(1), the strain ϵ_b in the strain-compensating layer 12B is given as $\epsilon_b = \epsilon_w \cdot L_w/L_b$. In FIG. 4, the case in which a flat surface morphology is obtained for the cap layer 13 is represented by \square , while the case in which an irregular surface morphology is obtained is represented by \times .

Page 11, paragraph starting at line 35 and bridging over to page 12, has been amended as indicated below:

A³ It is believed that the surface morphology observed on the surface of the cap layer 12 reflects the surface morphology of the optical absorption layer 12A and the strain-compensating layer 12B in the superlattice structure 12 underneath the cap layer 13. Thus, in the region represented in FIG.4 by \times , it is believed that the regular stacking of the optical absorption layer 12A and the strain-compensating layer 12B is destroyed. Therefore, it is necessary, in view of the result of FIG.4, to chose the thickness L_w of the optical absorption layers 12A and the strain ϵ_w so as to fall in the region of excellent surface morphology defined by Eq.(2) when the superlattice structure 12 of FIG.3 is to be used for the photodetection layer of a semiconductor photodetection device.

Page 16, paragraph starting at line 34 and bridging over to page 17, has been amended as indicated below:

A4 Referring to FIG.7, the semiconductor photodetection device 30 has a general construction similar to the conventional semiconductor photodetection device 20 explained with reference to FIG.1 except that the photodetection layer 3 is formed of an alternate repetition of an InGaAs optical absorption layer 3a having a thickness of 20 nm and accumulating a compressive strain of +0.4 % and an InGaAs strain-compensating layer 3b having a thickness of 10 nm and accumulating therein a tensile strain of -0.8%. In the superlattice structure of the photodetection layer 3, the layers 3a and 3b are repeated 40 times.

Page 18, paragraph starting at line 35, has been amended as indicated below:

A5 Finally, the micro-lens 7A is formed on the bottom surface of the InP substrate 7, and the p-type electrode 9 and the n-type electrode 10 are formed.

Page 19, paragraph starting at line 21, has been amended as indicated below:

A6 In the photodetection device 30, the thickness of the strain-compensating layer 3b is set smaller than the thickness of the optical absorption layer 3a. Further, the strain in the strain-compensating layer 3b is increased such that the product of the tensile strain and the thickness of the strain-compensating layer becomes substantially identical with the product of the compressive strain and the thickness of the optical absorption layer 3a.